DISCUSSION OF:

MARKETPLACE LENDING: A NEW BANKING PARADIGM

by Boris Vallee and Yao Zeng

Discussion by:
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Already Forthcoming

• The paper has already been forthcoming, so my job is not really to talk to details of improving the paper…
  • But rather what the audience should remember as takeaways
  • And how to place the contribution in setting.

Two Empirical Takeaways

1. Sophisticated investors do better

2. Sophisticated investors do better because of their use of the data feed of information on borrowers
   
   Experiment: Diff-in-diff around the cutting back of 44 data items from 100 to 56 on LC in Dec 2104
Two Empirical Takeaways

Big Picture:
The incidence of returns in platform investing is surely a first order question.
  • The whole point of the JOBS Act was this.
  • Later Argue: Less important on lending platforms

Likewise, whether this incidence is about data usage (skill) versus cognitive weaknesses by the naïve is also of primary importance.
• **Advanced investors**: most sophisticated, largest

• **Monitor** however seem also sophisticated, large. Authors argue more passive. But these are accounts not trading; just using these portfolios as learning.

• **Robot / Regular** seem most like regular folks (not institutions), with median investment amount of $1600.

### Table 1: Summary Statistics

<table>
<thead>
<tr>
<th></th>
<th>Number (1)</th>
<th>Total Amount Invested (2)</th>
<th>Median Amount Invested (3)</th>
<th>Mean Amount Invested (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lending Club</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7,368</td>
<td>138,633,952</td>
<td>3,050</td>
<td>18,815.7</td>
</tr>
<tr>
<td>Regular</td>
<td>4,435</td>
<td>56,692,279</td>
<td>1,600</td>
<td>12,783.6</td>
</tr>
<tr>
<td>Advanced</td>
<td>2,933</td>
<td>81,703,628</td>
<td>5,925</td>
<td>27,936.8</td>
</tr>
<tr>
<td>Monitor-Only</td>
<td>636</td>
<td>13,309,525</td>
<td>4,650</td>
<td>20,926.9</td>
</tr>
</tbody>
</table>
“Sophisticated Investors Do Better”: Main Results

Table 3: Screening Performance

<table>
<thead>
<tr>
<th>Account Type</th>
<th>Robot (1)</th>
<th>Advanced (2)</th>
<th>Monitor (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Account Type</td>
<td>-0.031***</td>
<td>-0.044***</td>
<td>-0.008***</td>
</tr>
<tr>
<td></td>
<td>(-10.84)</td>
<td>(-18.04)</td>
<td>(-4.68)</td>
</tr>
<tr>
<td>Month FE</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Interest Rate FE</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Cluster</td>
<td>Int. Rate</td>
<td>Int. Rate</td>
<td>Int. Rate</td>
</tr>
<tr>
<td>Observations</td>
<td>365,691</td>
<td>365,691</td>
<td>365,691</td>
</tr>
<tr>
<td>Pseudo $R^2$</td>
<td>0.062</td>
<td>0.064</td>
<td>0.061</td>
</tr>
</tbody>
</table>

- Why do we never see these type indicators in the same estimation?
- I’m not entirely convinced here
"Sophisticated Investors Do Better Because of Use of Data": Main Results

- Dependent variable: Loan Charge-off
- Doesn’t this say that ex post to the experiment the regular folks (robot investors) are those most hurt by the cutting back on data fields to the data feed
- Possibility: speaks to ex ante use of data
  - Interesting but not the story pitched here

<table>
<thead>
<tr>
<th>Table 4: Difference in Difference Analysis</th>
<th>-2/+2 months Window (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robot Account</td>
<td>-0.074*** (-6.98)</td>
</tr>
<tr>
<td>Robot Account x Post</td>
<td>0.037** (2.68)</td>
</tr>
<tr>
<td>Advanced Account</td>
<td>-0.053*** (-6.14)</td>
</tr>
<tr>
<td>Advanced Account x Post</td>
<td>0.015 (1.42)</td>
</tr>
<tr>
<td>Monitor-Only Account</td>
<td>0.001 (0.16)</td>
</tr>
<tr>
<td>Monitor-Only Account x Post</td>
<td>0.016 (1.71)</td>
</tr>
<tr>
<td>Month FE</td>
<td>Yes</td>
</tr>
<tr>
<td>Interest Rate FE</td>
<td>Yes</td>
</tr>
<tr>
<td>Cluster</td>
<td>Int. Rate</td>
</tr>
<tr>
<td>Observations</td>
<td>37,615</td>
</tr>
<tr>
<td>Pseudo R²</td>
<td>0.060</td>
</tr>
</tbody>
</table>
The Experiment

**LendingRobot webpage** concerning the Dec 2014 withdrawal of 44 data fields:

- “Lending Club recently announced changes to the data it makes available to investors. The changes include removing 44 fields from the data made available for every loan.

- Of those fields, only one is currently used as a filtering criterion on LendingRobot: “New Accounts (24 months)”.

- If you use this criterion in your investment rules, you should modify them before December 10th 2014.

- Investors that rely on LendingRobot’s statistical model (using “expected return” in their rules) don’t have to do anything – **our model is not affected by the changes.**"
Placing the contribution in marketplace setting

1. Title “a New Banking Paradigm”
   • (Not just this paper)
   • Household finance ≠ retail banking
   • The counterfactual here is credit cards, not bank lending
   • Why do I care?
     Because we seem caught-up on figuring out how to (for example) “bank the unbanked” when in fact a bank may not be optimal financial services for many/most people
<table>
<thead>
<tr>
<th>Type of Loan</th>
<th>Annual Income</th>
<th>Loan Amount</th>
<th>Interest Rate</th>
<th>Term Months</th>
<th>Count</th>
<th>% of Sample</th>
<th>Payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car</td>
<td>65,993</td>
<td>8,556</td>
<td>0.134</td>
<td>39.2</td>
<td>185</td>
<td>0.8%</td>
<td>$267.29</td>
</tr>
<tr>
<td>Credit Card</td>
<td>74,017</td>
<td>15,406</td>
<td>0.134</td>
<td>39.8</td>
<td>5,680</td>
<td>25.0%</td>
<td>$475.58</td>
</tr>
<tr>
<td>Debt Consolidation</td>
<td>75,468</td>
<td>16,350</td>
<td>0.141</td>
<td>41.6</td>
<td>13,797</td>
<td>60.8%</td>
<td>$492.27</td>
</tr>
<tr>
<td>Home Improvement</td>
<td>87,893</td>
<td>15,056</td>
<td>0.129</td>
<td>41.8</td>
<td>1,120</td>
<td>4.9%</td>
<td>$444.33</td>
</tr>
<tr>
<td>House</td>
<td>82,617</td>
<td>16,912</td>
<td>0.139</td>
<td>41.7</td>
<td>138</td>
<td>0.6%</td>
<td>$506.25</td>
</tr>
<tr>
<td>Major Purchase</td>
<td>78,365</td>
<td>9,740</td>
<td>0.129</td>
<td>39.4</td>
<td>443</td>
<td>2.0%</td>
<td>$301.56</td>
</tr>
<tr>
<td>Medical</td>
<td>73,325</td>
<td>8,375</td>
<td>0.191</td>
<td>38.0</td>
<td>122</td>
<td>0.5%</td>
<td>$289.11</td>
</tr>
<tr>
<td>Moving</td>
<td>76,911</td>
<td>8,325</td>
<td>0.193</td>
<td>37.6</td>
<td>73</td>
<td>0.3%</td>
<td>$290.08</td>
</tr>
<tr>
<td>Other</td>
<td>68,913</td>
<td>9,702</td>
<td>0.197</td>
<td>40.0</td>
<td>696</td>
<td>3.1%</td>
<td>$324.56</td>
</tr>
<tr>
<td>Renewable Energy</td>
<td>99,977</td>
<td>12,602</td>
<td>0.194</td>
<td>42.5</td>
<td>11</td>
<td>0.0%</td>
<td>$401.91</td>
</tr>
<tr>
<td>Small Business</td>
<td>92,278</td>
<td>17,023</td>
<td>0.193</td>
<td>40.9</td>
<td>253</td>
<td>1.1%</td>
<td>$557.48</td>
</tr>
<tr>
<td>Vacation</td>
<td>63,913</td>
<td>6,003</td>
<td>0.190</td>
<td>36.9</td>
<td>55</td>
<td>0.2%</td>
<td>$211.76</td>
</tr>
<tr>
<td>Wedding</td>
<td>70,315</td>
<td>11,703</td>
<td>0.194</td>
<td>39.4</td>
<td>134</td>
<td>0.6%</td>
<td>$394.56</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>75,674</strong></td>
<td><strong>15,542</strong></td>
<td><strong>0.141</strong></td>
<td><strong>41.0</strong></td>
<td><strong>22,707</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>$473.86</strong></td>
</tr>
</tbody>
</table>

These loans are overwhelmingly debt consolidations (credit card debt generally).
2. Introduction 1st sentence:

“Platforms... have been rapidly gaining market share in consumer lending over the last decade”

- This is only true in mortgages
- Mortgage platforms are not funded by a marketplace system

Introduction, continued:

“The innovation on the borrower side relies mainly on streamlining an online application process that uses low-cost information technology to collect standardized information from dispersed individual borrowers on a large scale”

AGREED

“However, the true breakthrough that marketplace lending creates lies on the investor side.” DISAGREE
WalletHub: At more than $1 trillion, outstanding credit card debt is at the highest point ever. Lending Club & Prosper are in the low tens of billions of float, combined.
NYFEd:
CC balances increased by $26 billion in 2017
Traditional Lending Model: e.g., credit cards

What really does the word disintermediation mean?
Disintermediation is in removing investment bank that issues ABS
Asset Packager Platforms: Disintermediation

Disintermediation is still in removing investment bank that issues ABS
Partial Balance Sheet Model

- Lender
- Clearing Bank
- Some Risk Stays on Balance Sheet
- Debt Facilities
- Equity
- Borrowers
- Obligation
- $\rightarrow$ $\rightarrow$
- ABS
- Investor 1
- Investor 2
- Investor 3
Punchline

Contributions here:

• VERY IMPORTANT to study incidence of returns by different investors as platform investing becomes mainstream
  • Lending platforms are one forum, although increasingly less-so

• VERY IMPORTANT to understand what informational advantages Big Data bring, and who can realize these benefits

• Quibbles on what this paper establishes, but great choice of topic
  • I’m sure punchline will be well received.